ABSTRACT

a lithium secondary battery includes: a positive electrode comprising a composite lithium oxide; a negative electrode comprising a material capable of absorbing and desorbing lithium; a separator interposed between the positive electrode and the negative electrode; and a non-aqueous electrolyte. The separator comprises non-woven fabric. At least one of the positive electrode and the negative electrode has a porous film that is adhered to a surface thereof, and the porous film comprises an inorganic oxide filler and a binder. The non-woven fabric preferably has a thickness of not less than 15 μ m and not more than 50 μ m. The non-woven fabric preferably has a melt-down temperature of 150°C or more.